# Health Risk Behaviors 2000



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The Michigan D	epartment	of Commun	nity :	Health	(MDCH)	is	an Equ	al Oppo	ortuni	ty Employ	yer,
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### BEHAVIORAL RISK FACTOR SURVEY SUMMARY MICHIGAN 2000



This report presents estimates from the 2000 Michigan Behavioral Risk Factor Survey (BRFS). The BRFS is a statewide telephone survey of Michigan residents, aged 18 and older. This survey is the only source of state-specific, population-based estimates of the prevalence of various behaviors, medical conditions, and preventive health care practices among Michigan adults.

All results from the 2000 Michigan BRFS presented in this summary have been weighted as described in the methods section and can be interpreted as estimates of the prevalence rates of various health risks among the general adult population of Michigan.

Selected Risk Factors	Michigan Estimates	National Estimates			
	Michigan (%)	Low (%) 1	Median (%) ²	High (%) <sup>3</sup>	
General Health Fair or Poor	13.7	9.7	14.0	32.8	
Current Cigarette Smoking	24.0	12.9	23.2	30.5	
Overweight (BMI > 25.0)	61.1	48.0	57.1	61.7	
Obese (BMI > 30.0)	22.5	14.2	20.1	25.0	
Diabetes (Ever Told)	7.1	3.8	6.1	8.6	
Fruits & Vegetables <5 Times/Day	77.2	63.1	76.9	92.8	
No Leisure-Time Physical Activity	23.3	15.5	26.9	54.1	
Mammogram (Never Had, Age 40+)	8.8	7.0	12.0	17.7	

<sup>&</sup>lt;sup>1</sup> The lowest prevalence estimate among the states.

The low, median, and high state estimates were taken from the CDC 2000 BRFSS Summary Prevalence Report.

<sup>&</sup>lt;sup>2</sup> The median of state-level prevalence estimates.

<sup>&</sup>lt;sup>3</sup> The highest prevalence among the states.

# PERCEIVED HEALTH STATUS

#### GENERAL HEALTH FAIR OR POOR-

Proportion of respondents who reported that their health, in general, was fair or poor.

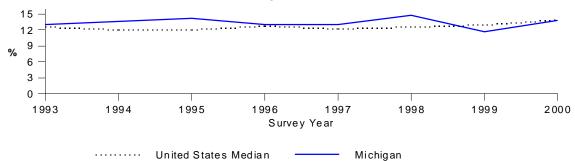
Poor self-reported health status is a good predictor of subsequent illness, use of health care services, premature death and functional disability. Studies since 1982 have shown that respondents with self-perceived poor health are two-to-seven times more likely to experience premature mortality than those who report their health as excellent.

Almost 14 (13.7) percent of Michigan respondents reported that in general their health was fair or poor. Perception of fair or poor health status tended to increase with age but decrease with higher educational and household income levels. For the second year in a row since 1993, the proportion of Michigan respondents who perceived their health as fair or poor was below the national median.

Demographic Characteristics	General Health Fair or Poor			
Total	13.7	±	1.4	
<b>Age</b> (Years) 18-24 25-34 35-44	6.5 5.4 8.7	± ± ±	3.4 2.1 2.5	
45-54 55-64 65-74 75+	16.1 19.9 21.8 36.6	± ± ±	3.4 4.6 5.1 7.1	
Sex Male Female	12.7 14.6	± ±	2.1 1.9	
Race W hite Black	12.9 18.8	± ±	1.5 4.6	
Education Less than High School High School Graduate Some College College Graduate	28.4 17.0 10.8 7.0	± ± ±	6.1 2.7 2.3 2.1	
Household Income <\$20,000 \$20,000-34,999 \$35,000-49,999 \$50,000-74,999 ≥\$75,000	29.4 14.9 9.6 8.1 6.6	± ± ± ±	5.3 3.1 3.0 2.8 2.4	

### **General Health Fair or Poor**

U.S. vs. Michigan, 1993-2000



# NO HEALTH CARE COVERAGE

#### NO HEALTH CARE COVERAGE-

Proportion of respondents who reported they did not have any kind of health care coverage.

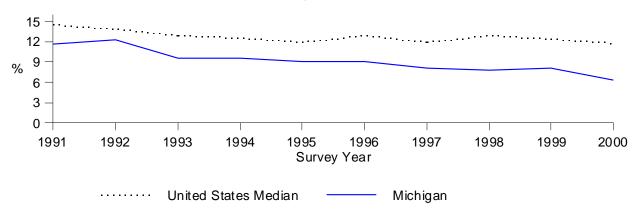
An estimated 42.6 million people in the United States, or 15.5 percent of the population, had no health insurance in 1999.<sup>3</sup> The uninsured have more severe illnesses and are more likely to die prematurely than the insured.<sup>4</sup> Lack of health care coverage and resources to pay medical bills may cause many Americans to avoid or delay making needed visits to physicians. This can increase morbidity and mortality if such things as life-saving screening tests and immunizations are not received, or received in an untimely manner.<sup>4</sup>

A little over six (6.3) percent of Michigan adults reported that they did not have any kind of health care coverage. The proportion of adults without health care coverage tended to decrease with older age groups and higher educational and household income levels. Health care coverage of those aged 65 years and older theoretically should be close to 100% because of Medicare. Since 1991, Michigan has consistently remained at or below the national median for respondents reporting that they had no health care coverage.

Demographic Characteristics	No Health Care Coverage (18+)			
Total	6.3	±	1.1	
<b>Age</b> (Years) 18-24 25-34 35-44 45-54 55-64 65-74 75+	17.5 8.1 6.8 3.7 4.1 0.0	± ± ± ± ±	5.7 2.7 2.2 1.7 2.3 0.0 0.0	
Sex Male Female	6.9 5.8	± ±	1.7 1.4	
Race White Black	5.5 10.0	± ±	1.2 3.9	
Education Less than High School High School Graduate Some College College Graduate	11.3 8.4 5.5 2.3	± ± ±	5.0 2.3 1.9 1.0	
Household Income <\$20,000 \$20,000-34,999 \$35,000-49,999 \$50,000-74,999 ≥\$75,000	13.7 8.3 4.1 2.2 1.6	± ± ± ±	4.1 2.6 2.1 1.6 1.5	

### No Health Care Coverage

U.S. vs. Michigan, 1991-2000



# **OBESITY**

#### **OBESITY-**

Proportion of respondents with a body mass index  $\geq$  30.0 kg/m2 (excluding pregnant women).

Obesity is a growing epidemic that threatens the lives of millions of Americans. Obesity increases the risk of many chronic diseases such as heart disease, stroke, diabetes, and certain types of cancer. Thirty to 40 percent of coronary heart disease deaths may be attributed, at least in part, to obesity. 11

It is estimated that nearly 23 (22.5) percent of Michigan's adult population was obese in 2000. Blacks (29.9 percent) were more likely to be obese than whites (21.6 percent). The proportion of Michigan adults who were obese tended to be lower among the youngest and oldest age groups and tended to be higher among those with less education and lower household incomes.

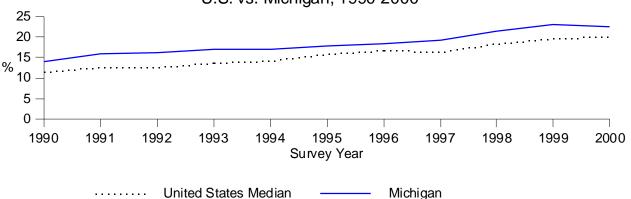
Since 1990, the prevalence of obesity in Michigan generally has been increasing. This phenomenon also has occurred nationally, and internationally in industrialized countries, and it appears to be increasing rapidly in many developing countries. <sup>12,13</sup> Some health risks from excess weight actually begin

Demographic Characteristics	Obesity (BMI ≥30.0)			
Total	22.5	±	1.8	
Age (Years)				
18-24	12.4	±	4.7	
25-34	19.1	±	4.1	
35-44	20.1	±	3.6	
45-54	33.9	±	4.7	
55-64	25.0	±	5.1	
65-74	29.0	±	6.3	
75+	15.8	±	5.6	
Sex				
Male	22.6	±	2.7	
Female	22.4	±	2.4	
Race				
White	21.6	±	2.0	
Black	29.9	±	5.7	
Education				
Less than High School	24.0	±	6.0	
High School Graduate	25.5	±	3.3	
Some College	20.3	±	3.1	
College Graduate	20.3	±	3.4	
Household Income				
<\$20,000	27.0	±	5.3	
\$20,000-34,999	23.8	±	3.7	
\$35,000-49,999	25.7	±	4.7	
\$50,000-74,999	20.3	±	4.3	
≥\$75,000	18.1	±	4.0	

with the BMI cutoff for overweight ( $\geq 25.0 \text{ kg/m}^2$ ). By this definition 61.1 percent of Michigan adults would be classified as overweight.

### Obesity

U.S. vs. Michigan, 1990-2000



4

# **SMOKING**

#### **CURRENT CIGARETTE SMOKING-**

Proportion of respondents who reported that they had ever smoked at least 100 cigarettes in their life and that they currently smoke cigarettes.

Smoking is one of the most preventable causes of death.<sup>5</sup> Each year in the United States over 400,000 deaths, or one of every five deaths, can be attributed to smoking.<sup>5</sup> Smoking contributes substantially to deaths from heart disease, lung disease, and cancers. Nearly one-third of all cancer deaths are related to smoking.<sup>6</sup>

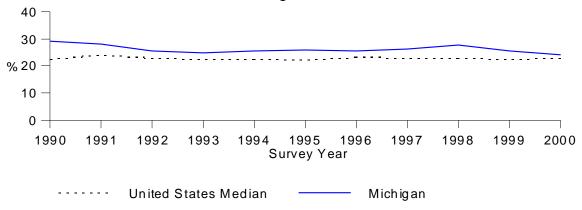
In 2000, an estimated 24 percent of Michigan adults were current smokers. The proportion of current cigarette smokers was higher among blacks (30.9 percent) than among whites (22.8 percent). The proportion of current smokers tended to decrease with higher educational and household income levels and older age groups beginning with the age group 45-54. Although the proportion of adults in Michigan who smoke has been above the national median since 1990, in 2000 this proportion was only

Demographic Characteristics		t r	
Total	24.0	±	1.8
Age (Years)			
18-24	28.7	±	6.5
25-34	28.9	±	4.5
35-44	30.3	±	4.2
45-54	24.2	±	4.0
55-64	19.7	±	4.5
65-74	12.4	±	4.4
75+	6.4	±	3.8
Sex			
Male	26.4	±	2.8
Female	21.9	±	2.4
Race			
White	22.8	±	2.0
Black	30.9	±	5.8
Education			
Less than High School	35.8	±	6.7
High School Graduate	30.0	±	3.5
Some College	25.3	±	3.4
College Graduate	10.8	±	2.5
Household Income			
<\$20,000	31.7	±	5.7
\$20,000-34,999	27.6	±	4.1
\$35,000-49,999	30.0	±	4.8
\$50,000-74,999	22.2	±	4.2
≥\$75,000	14.2	±	3.5

slightly higher (24.1 percent vs. 23.2 percent) and was statistically the same as the median for the country.

### **Current Cigarette Smoking**

U.S. vs. Michigan, 1990-2000



# FRUIT, VEGETABLE & GRAIN

#### FRUIT AND VEGETABLE CONSUMPTION-

Proportion of respondents whose total reported consumption of fruits (including juice) and vegetables was fewer than five times per day.

Poor diet and physical inactivity follow only smoking as a leading cause of death in the United States. <sup>14</sup> The contribution of diet to health is complex and diet is difficult to measure. Diets that are abundant in plant foods have been associated with reduced risks of various cancers and heart disease. For these reasons one effort to improve Americans' diets is to encourage everyone to eat fruits and vegetables at least five times a day. This campaign is known as the national "5 A Day" program.

Using this dietary indicator, the estimated proportion of the Michigan population that does not consume fruits and vegetables at least five times per day is higher among males (82.5 percent) than among females (72.4 percent) and decreases as age increases.

Demographic Characteristics	Fruits & Vegetables (< 5 times/day)				
Total	77.2	±	1.8		
Age (Years)					
18-24	84.2	±	5.4		
25-34	82.7	±	3.7		
35-44	77.5	±	3.7		
45-54	79.9	±	3.8		
55-64	70.6	±	5.2		
65-74	72.1	±	6.1		
75+	57.5	±	8.2		
Sex					
Male	82.5	±	2.5		
Female	72.4	±	2.5		
Race					
White	77.6	±	1.9		
Black	76.5	±	5.5		
Education					
Less than High School	77.2	+	6.2		
High School Graduate	80.2	±	3.0		
Some College	77.1	±	3.2		
College Graduate	73.6	±	3.5		
Household Income					
<\$20,000	69.2	±	5.9		
\$20,000-34,999	81.3	±	3.4		
\$35,000-49,999	78.3	±	4.2		
\$50,000-74,999	80.2	±	4.1		
≥\$75,000	76.4	±	4.2		

#### WHOLE-GRAIN FOOD CONSUMPTION-

Proportion of respondents whose total reported consumption of whole-grain foods was fewer than three servings per day (ages 18-64 years\*).

Whole-grain foods are a rich source of vitamins, minerals, complex carbohydrates, dietary fiber, antioxidants, and phytochemicals. There is increasing evidence that wholegrain foods may lower the risk of coronary heart disease, diabetes, and hypertension. The 2000 Dietary Guidelines recommend choosing a variety of grains daily, especially whole grains. <sup>16</sup> Healthy People 2010 includes an objective to increase the proportion of persons who consume six daily servings of grain products, with at least three being whole grain. 17 The 2000 Michigan BRFS included a set of questions to examine whole-grain food consumption by Michigan adults. Respondents were asked the number of servings they usually ate of wholegrain foods. Responses were summed to estimate the proportion of adults in Michigan who usually ate fewer than three servings per day of whole-grain foods.

Demographic Characteristics	Whole-grain Food (< 3 servings/day)				
Total	84.4	±	1.8		
Age (Years) 18-24 25-34 35-44 45-54 55-64 65-74 75+	88.1 85.5 83.5 84.5 80.3	± ± ± ±	5.3 3.6 3.6 3.7 4.7		
Sex Male Female	81.7 86.9	± ±	3.0 2.1		
Race W hite B lack	83.9 89.3	± ±	2.0 4.2		
Education Less than High School High School Graduate Some College College Graduate	88.9 85.2 86.6 79.9	± ± ±	5.8 3.4 3.0 3.5		
Household Income <\$20,000 \$20,000-34,999 \$35,000-49,999 \$50,000-74,999 ≥\$75,000	85.1 84.5 84.1 84.1 83.1	± ± ± ±	5.2 4.0 4.3 4.1 4.0		

# PHYSICAL INACTIVITY

# NO LEISURE-TIME PHYSICAL ACTIVITY (LTPA)–

Proportion of respondents who reported they did not participate in any physical activities, recreation, or exercises in their leisure time (such as running, golfing, or walking for exercise) within the past month.

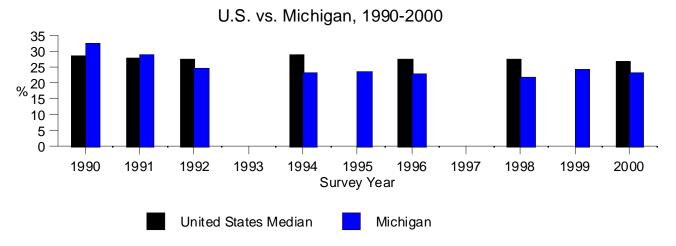
A lifestyle characterized by physical inactivity and poor dietary habits is second only to tobacco use as a leading cause of premature death in the United States. <sup>14</sup> Inactive people can improve their health and reduce their risk of developing or dying from heart disease, diabetes, high blood pressure, and colon cancer by becoming even moderately active on a regular basis. <sup>15</sup> People of all ages can obtain health benefits by including regular physical activity in their daily routines.

Over 23 (23.3) percent of Michigan adults reported that they did not participate in any physical activity during their leisure time in the past month. Female respondents (26.6 percent) were more likely than male respondents (19.7 percent) to report no leisure-time physical activity as were blacks (33.5 percent) compared with whites (21.4 percent). Inactivity increased with lower educational and household

Demographic Characteristics	No LTPA (Past Month)			
Total	23.3	±	1.8	
Age (Years)				
18-24	18.6	±	5.5	
25-34	20.8	±	3.9	
35-44	19.7	±	3.6	
45-54	25.5	±	4.1	
55-64	23.0	±	4.9	
65-74	27.4	±	5.8	
75+	38.3	±	7.2	
Gender Male Female	19.7 26.6	± ±	2.6 2.5	
Sex				
White	21.4	±	1.9	
Black	33.5	±	5.8	
Education				
Less than High School	33.0	±	6.3	
High School Graduate	29.3	±	3.4	
Some College	22.0	±	3.1	
College Graduate	13.0	±	2.9	
Household Income				
<\$20,000	32.0	±	5.3	
\$20,000-34,999	25.1	±	3.9	
\$35,000-49,999	23.6	±	4.5	
\$50,000-74,999	20.1	±	4.1	
≥\$75,000	14.0	±	3.5	

income levels and tended to increase with older age groups. Since 1992 the proportion of Michigan adults who reported that they engaged in no leisure-time physical activity has been slightly lower than the median for the country.

### **No Leisure-Time Physical Activity**



U.S. data were not collected in 1995 or 1999. No data were collected in 1993 or 1997.

### **INJURY**

# **ASTHMA**

#### INJURY-

Proportion of respondents who reported that in the past twelve months they had had an injury that required immediate (within twenty-four hours) medical attention at an emergency room, ready care center, or doctor's office.

In 1998, in Michigan, the third, fourth and fifth leading causes of years of potential life lost before age 75 were unintentional injuries, homicide and suicide. <sup>18</sup> In addition to mortality, there also is tremendous individual suffering and disability from non-fatal injuries and great costs to the health care system.

It was estimated that 14.7% of Michigan adults had sustained an injury during the previous 12 months that had required immediate medical attention. The prevalence of having had an injury was lower among those aged 65-74 years (8.1%) as compared with both those aged 45 years or younger and those aged 75 years or older.

Demographic Characteristics		In jury	1
Total	14.7	±	1.5
<b>Age</b> (Years) 18-24 25-34 35-44	20.7 13.5 15.6	± ±	6.1 3.4 3.3
45-54 55-64 65-74 75+	16.2 11.0 8.1 16.4	± ± ±	3.7 3.5 3.3 5.4
Sex Male Female	15.3 14.2	± ±	2.4 2.0
Race White Black	15.0 12.0	± ±	1.7 3.9
Education Less than High School High School Graduate Some College College Graduate	12.3 16.8 15.5 12.4	± ± ±	4.5 2.9 2.9 2.7
Household Income <\$20,000 \$20,000-34,999 \$35,000-49,999 \$50,000-\$74,999 >\$75,000	15.2 15.0 15.2 15.3 11.9	± ± ±	4.4 3.2 3.9 3.7 3.5

#### ASTHMA-

Proportion of respondents who had ever been told by a doctor that they had asthma and still have asthma.

Both the prevalence of asthma and asthma mortality have increased in the United States since 1980.<sup>19</sup> This phenomena is being seen around the world as well.<sup>20</sup> Although proper diagnosis and effective management of diagnosed asthmatics can minimize the frequency and severity of asthma attacks, it is the most common chronic disease of childhood and a leading cause of disability.<sup>21,22</sup>

Almost ten (9.8) percent of respondents to the 2000 BRFS reported that they had ever been told by a doctor that they had asthma. Over seven (7.3) percent of respondents reported that they still had asthma. Females (9.4 percent) were more likely to report that they still had asthma than males (4.9 percent) and whites (7.8 percent) were more likely than blacks (3.4 percent).

Demographic Characteristics			
Total	7.3	±	1.1
Age (Years)			
18-24	8.7	±	4.1
25-34	5.8	±	2.2
35-44	6.7	±	2.2
45-54	7.7	±	2.4
55-64	10.5	±	3.5
65-74	4.9	±	2.6
75+	7.4	±	3.9
Sex			
Male	4.9	±	1.4
Female	9.4	±	1.6
Race			
W hite	7.8	±	1.2
Black	3.4	±	1.9
Education			
Less than High School	6.9	±	3.1
High School Graduate	6.5	±	1.8
Some College	5.7	±	1.7
College Graduate	9.5	±	2.4
Household Income			
<\$20,000	12.0	±	3.9
\$20,000-34,999	4.7	±	1.7
\$35,000-49,999	6.7	±	2.8
\$50,000-74,999	8.1	±	2.7
≥\$75,000	6.4	±	2.4

# **DIABETES**

#### **DIABETES**-

Proportion of respondents who reported that they had ever been told by a physician that they have diabetes (excluding gestational diabetes).

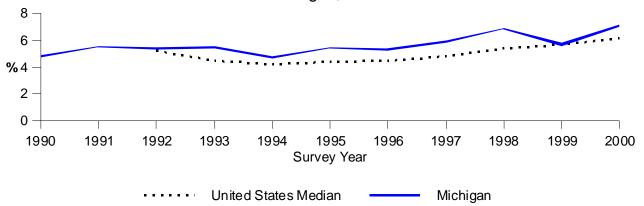
Diabetes causes the body either not to produce insulin or not to use insulin properly. Diabetes is the seventh leading cause of death in the United States and in Michigan. Approximately 16 million Americans have diabetes, but nearly one-third are undiagnosed. Diabetes is both a disease and a risk factor for other diseases. People diagnosed with diabetes are two-to-four times more likely to have a heart attack or stroke compared with people without diabetes. It is the leading cause of new cases of blindness, end-stage renal disease, and lower extremity amputations.

Based on the 2000 BRFS, 7.1 percent of Michigan adults had been told by a physician that they have diabetes. The proportion tended to increase with age and decrease with higher educational and household income levels. Blacks (12.3 percent) were more likely to have been told they have diabetes than whites (6.2 percent).

Demographic Characteristics	Diabetes (Ever Told)			
Total	7.1	±	1.0	
Age (Years)				
18-34	0.9	±	0.7	
35-44	4.3	±	1.8	
45-54	7.1	±	2.3	
55-64	16.8	±	4.3	
65-74	16.0	±	4.8	
75+	15.2	±	5.4	
Sex				
Male	7.4	±	1.5	
Female	6.8	±	1.4	
Race				
White	6.2	±	1.0	
Black	12.3	±	3.8	
Education				
Less than High School	14.1	±	4.4	
High School Graduate	7.7	±	1.9	
Some College	6.5	±	1.8	
College Graduate	4.1	±	1.6	
Household Income				
<\$20,000	13.0	±	3.8	
\$20,000-34,999	7.5	±	2.3	
\$35,000-49,999	7.3	±	2.5	
\$50,000-74,999	5.3	±	2.2	
≥\$75,000	3.8	±	1.9	

### **Ever Told Have Diabetes**

U.S. vs. Michigan, 1990-2000



# **BREAST CANCER SCREENING**

# LESS THAN RECOMMENDED BREAST CANCER SCREENING-

Proportion of female respondents aged 40 and older who did not have both a clinical breast exam and a screening mammogram within the past year. (Women whose last mammogram was done because of breast cancer or another breast problem were excluded.)

Breast cancer is the most common non-skin cancer among American women. Mammography can detect breast cancer an average of 1.7 years before it can be felt by clinical breast exam and, in most cases, survival increases with earlier detection.<sup>23</sup>

The American Cancer Society and the National Cancer Institute recommend that women aged 20-39 have a clinical breast examination every three years and an annual screening mammogram and clinical breast exam beginning at age 40.

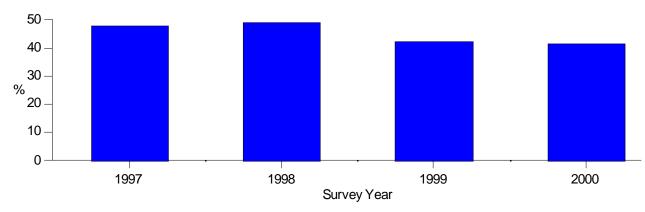
The 2000 Michigan BRFS indicates that nearly 42 (41.6) percent of females aged 40 and older had not had a mammogram and clinical breast exam within the past year. The proportion who had not had the

Demographic Characteristics	Less Than Recommended Breast Cancer Screening		
Total	41.6	±	3.7
Age (Years)			
40-49	46.9	±	6.5
50-64	30.6	±	5.7
65+	46.9	±	6.8
Race			
White	40.8	±	4.0
Black	46.8	±	11.9
Education			
Less than High School	63.2	±	11.1
High School Graduate	42.4	±	6.2
Some College	42.3	±	7.1
College Graduate	30.2	±	6.8
Household Income			
<\$20,000	56.8	±	8.6
\$20,000-34,999	42.0	±	8.1
\$35,000-49,999	39.1	±	9.9
\$50,000-74,999	31.1	±	9.3
≥\$75,000	36.1	±	9.0

recommended screening was lowest in the age group 50-64 years old and among those with a college education. This proportion tended to decrease with increasing educational and household income levels.

### < Recommended Breast Cancer Screening

Michigan Women Aged 40+, 1997-2000



<sup>\*</sup> In 1997 annual screening mammograms were recommended beginning at age 40 (previously it had been only every other year for ages 40-49). The graph above represents lack of compliance with the current recommendation for 1997-2000. National data are not presented due to different definitions used by MDCH and CDC.

# **CERVICAL CANCER SCREENING**

# LESS THAN RECOMMENDED CERVICAL CANCER (PAP) SCREENING-

Proportion of female respondents aged 18 and older who had not had a Pap test within the previous three years. (Respondents whose last Pap test was done because of a problem were excluded.)

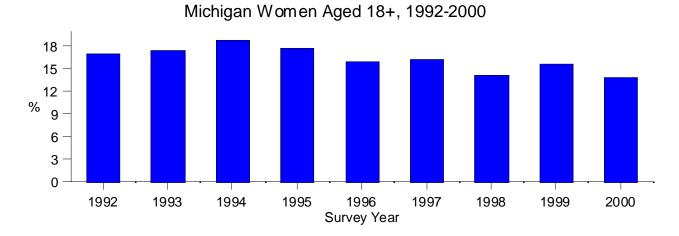
When cervical cancer is detected early, it can usually be treated successfully. <sup>23</sup> The incidence of invasive cervical cancer has decreased over the last 40 years, in large part due to early detection by Papanicolaou (Pap) smear screening. <sup>23</sup> The American Cancer Society recommends that women have annual Pap smears beginning at age 18 or when they become sexually active, if this occurs earlier. Once a woman has had three consecutive negative annual Pap smears this test may be done less often. In such situations the frequency of screening should be determined by the woman's health care provider, but it should not be less than once every three years.

About 14 (13.8) percent of Michigan women aged 18 years and older had not had a screening Pap smear within the previous three years. Women who had less than a high school education and those from the lowest

Demographic Characteristics	Less Than Recommended Cervical Cancer Screening		
Total	13.8	±	2.1
Age (Years)			
18-29	18.2	±	6.2
30-39	5.8	±	2.9
40-49	7.4	±	3.6
50-59	8.7	±	4.0
60-69	15.8	±	6.0
70+	33.1	±	7.4
Race			
White	14.0	±	2.3
Black	13.5	±	6.3
Education			
Less than High School	28.3	±	9.5
High School Graduate	13.9	±	3.6
Some College	14.7	±	3.9
College Graduate	7.6	±	3.2
Household Income			
<\$20,000	23.9	±	7.1
\$20,000-34,999	15.8	±	4.6
\$35,000-49,999	8.2	±	4.1
\$50,000-74,999	6.3	±	3.6
≥\$75,000	10.4	±	5.1

household income category were more likely not to have had the minimum recommended screening than women with more education and higher household incomes.

### < Recommended Cervical Cancer Screening



## HIV/AIDS

# PERCEIVED RISK OF HIV INFECTION HIGH OR MEDIUM-

Proportion of respondents who reported that they thought their chances of getting infected with HIV were high or medium. (Only respondents aged 18-64 were asked this question.)

HIV the virus that causes AIDS, can be found in blood, semen, and vaginal secretions of an infected person. The virus is mainly spread by unprotected sexual intercourse and by sharing needles with an HIV-infected person. The virus can also be transmitted from an infected mother to her child during birth.

Most cases of HIV can be prevented by avoiding unprotected sex and not injecting illegal drugs. One can lower, but may not eliminate, the risk of HIV infection by using a condom, limiting the number of sexual partners, and not sharing needles.

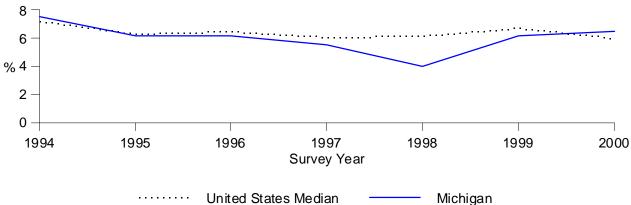
Over six (6.5) percent of respondents reported that they thought their chances of getting infected with HIV were high or medium. The perceived risk was

Demographic Characteristics	Risk of HIV Infection High or Medium		
Total	6.5	±	1.2
<b>Age</b> (Years) 18-24 25-34 35-44	9.0 8.4 5.2	± ± ±	4.3 2.8 1.9
45-54 55-64	6.1 3.9	± ±	2.2 2.2
Gender Male Female	6.3 6.8	± ±	1.7 1.6
Race White Black	5.8 10.3	± ±	1.2 4.3
Education Less than High School High School Graduate Some College College Graduate	12.0 7.9 4.9 5.0	± ± ±	6.3 2.4 1.6 1.8
Household Income <\$20,000 \$20,000-34,999 \$35,000-49,999 \$50,000-74,999 ≥\$75,000	10.8 6.8 5.8 5.1 4.6	± ± ± ±	4.9 2.5 2.6 2.3 2.2

higher for blacks (10.3 percent) compared with whites (5.8 percent). It tended to be higher for those with the least education and household income and for the younger age groups.

# Perceived Risk of HIV High or Medium

U.S. vs. Michigan, 1994-2000



# Selected Risk Factors and Health Indicators

Risk Factor/Health Indicator	Prevalence Estimate (%) and +/-95% Confidence Interval		
	Overall	Males	Females
Physical health poor (mean number of days in past month)	$3.3 \pm 0.3$	$3.0 \pm 0.5$	$3.6 \pm 0.4$
Mental health poor (mean number of days in past month)	$3.6 \pm 0.3$	$2.7 \pm 0.5$	4.4 ± 0.5
Limited activity (mean number of days in past month)	1.9 ± 0.2	$1.6 \pm 0.3$	$2.2 \pm 0.3$
Cost prevented seeing a doctor (past year)	8.9 ± 1.2	6.3 ± 1.6	11.3 ± 1.8
Routine checkup in the past year	75.5 ± 1.9	67.9 ± 3.0	82.3 ±2.2
Average number of cigarettes smoked/day	15.1 ± 0.9	16.1 ± 1.4	14.0 ± 1.1
Tried to quit smoking (at least one day in past year)	59.1 ± 4.9	58.7 ± 7.0	59.5 ± 6.7
Advised by doctor about smoking cessation*	52.7 ± 4.4	44.9 ± 6.2	61.1 ± 6.0
Ever tested for HIV	48.8 ± 2.4	46.5 ± 3.5	51.0 ± 3.2
Tested for HIV in past 12 months	15.8 ± 1.8	15.6 ± 2.6	16.0 ± 2.5
Provided care to someone aged 60+ ( past month)*	17.4 ± 1.5	12.8 ± 2.1	21.5 ± 2.2
No leisure-time physical activity	23.3 ± 1.8	19.7 ± 2.6	26.6 ± 2.5
Sedentary lifestyle (<20 min., 3x/week)	49.7 ± 2.2	47.3 ± 3.3	51.9 ± 2.8
No regular & sustained activity (<30 min., 5x/week)	74.6 ± 1.9	73.3 ± 2.9	75.7 ± 2.5
Increase physical activity next 6 months (age 18-64)*	57.5 ± 2.4	53.4 ± 3.6	61.6 ± 3.1
More physical activity than one year ago (age 18-64)*	32.0 ± 2.2	29.0 ± 3.2	$34.8 \pm 3.0$
Eating more vegetables than one year ago*	26.8 ± 1.9	24.6 ± 2.8	28.8 ± 2.6
Eating more fruit than one year ago*	26.5 ± 1.9	22.8 ± 2.7	29.8 ± 2.6
Obese who are currently trying to lose weight	74.0 ± 4.0	74.1 ± 5.9	73.9 ± 5.3
Obese advised by heath professional to lose weight	$36.6 \pm 4.4$	$36.0 \pm 6.0$	$37.2 \pm 5.8$
Total respondents currently trying to lose weight	44.4 ± 2.1	36.7 ± 3.1	50.5 ± 2.8
Total advised by health professional to lose weight	17.2 ± 1.6	16.1 ± 2.3	18.3 ± 2.2
* State added questions			

## **METHODS**

The Behavioral Risk Factor Surveillance System (BRFSS) consists of annual surveys coordinated through a cooperative agreement with the Centers for Disease Control and Prevention (CDC). The annual Michigan surveys follow the overall CDC telephone survey protocol for BRFSS.<sup>24</sup> The 2000 Michigan BRFSS data were collected quarterly by the Institute for Public Policy and Social Research at Michigan State University. The sample of telephone numbers was selected using a list-assisted, random-digit-dialing methodology with disproportionate stratification based on phone bank density.

The 2000 BRFS data were weighted to adjust for the probabilities of selection (based on the probability of telephone number selection, the number of adults in the household, and the number of residential phone lines) and a poststratification weighting factor that adjusted estimates (using 1999 Michigan intercensal population distributions) by age, sex, and race. Calculations of the prevalence estimates and confidence interval limits were performed using SUDAAN, a statistical computing program that was designed for analyzing data from multistage sample surveys.<sup>25</sup>

Unless otherwise specified, respondents who answered that they did not know or refused to answer were not included in the calculation of estimates.

#### SAMPLE RESULTS

A total of 17,949 telephone numbers were used for the 2000 Michigan BRFS. The final call dispositions for the sample numbers fell into the following categories: 2,522 completed interviews, 2,234 refusals, 7,340 non-working numbers, 1,522 ring-no-answers, 3,263 businesses, 177 households reached but no members eligible, 571 eligible respondents selected but not interviewed, 64 informants or eligible respondents with language barriers, 91 busy numbers, 46 interviews were terminated, and 119 informants or eligible respondents unable to participate. The CASRO (Council of American Survey Research Organizations) response rate, which includes a portion of the dispositions with unknown eligibility in the denominator of the rate, was 42.7 percent. Forty-five percent (45.4 percent) of all household contacts resulted in a completed interview; 40.2 percent of all household contacts refused to participate.

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